PLC Capabilities.
HMI Visibility.
No Programmer Needed.

PD9000 ConsoliDator+ Multivariable Controller

PRECISION DIGITAL

Presenter

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Takeaways

01 Learn about the ConsoliDator+ functionality that makes it the perfect user-friendly alternative to a PLC

02 See how the ConsoliDator+ helped an end user solve a major problem while avoiding the cost and hassle of installing and programming a new PLC.

03 Understand how the new add-on features expand the ConsoliDator+ capabilities even further

04 Gain insights on how the ConsoliDator+ is able to satisfy a multitude of process display, control, and alarm applications

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Never Hire A Programmer Again!

Hiring a systems integrator to install a PLC and create a custom program is expensive. Worst of all, you cannot change or expand on it yourself.

Regain control of your own process with the ConsoliDator+ multivariable controller.

- It comes with an abundance of powerful features
- Its user-friendly interface makes it easy to configure
- It can simplify your process control without the need for complex PLC programming
- It comes with a built-in, full-color LCD viewing screen
- Never hire a programmer again!

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What It Can Do

The ConsoliDator+ has the power and flexibility of a PLC.

Schedule events for specific days or times
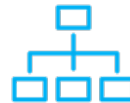
Build complex math functions step-by-step

Timers to control events and outputs

Automatically change inputs based on events

Easily use Boolean logic on alarms or relays

Modbus TCP/IP to integrate into SCADA

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Reducing Costs by Avoiding a PLC

The Application

- A wastewater customer was monitoring and controlling the level of a body of water to maintain an acceptable water level with hose pumps that run at 100% capacity when they are turned on.

- Leak detection and emergency shutoff for hose pumps if a leak in the hose is detected.

- When a leak occurs, the current draw of the pump will exceed 115 amps at which point it is shut off.

The Challenge

- The customer installed a VFD so they don't have to run their pumps at 100% capacity at all times.

- Their newly installed VFD can only store ONE shutoff setpoint (in Amps). That means if a pump experiences a leak, but is not running at 100% capacity, it may NEVER reach or exceed the emergency shutoff setpoint!

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Reducing Costs by Avoiding a PLC

The Solution

- The ConsoliDator+ was configured to monitor the level of water, and turn the hose pumps on and off accordingly.

- Instead of using just one emergency shutoff point, the ConsoliDator+ was configured with the *"Rate of Change"* channel function to monitor the current draw of the pumps at all times.

- If and when a pump's current draw exceeds 30 Amps/second, the ConsoliDator+ will throw an alarm and shut the leaking pump down. With this configuration, it won't matter whether a pump is running at 20% capacity or 100% capacity since it is only looking for the rate of change in current draw as the pump operates.

- Per the customer's request, the pumps will NOT automatically start again until an operator has physically acknowledged the "Leak Alarm" and fixed the problem at the source.

Advanced Math & Logic

Combine multiple math channels to create complex math functions

- Add, Subtract, Multiply, Divide
- Average and Weighted Average
- Absolute Value or Difference
- Built-In Open Channel Flow Formulas

Use Boolean operators to create multi-input alarms or combine these alarms for complex conditional events

- 2+ Alarms Combine for AND & OR Events

Quick and Easy Setup

FREE ConsoliDator+ Configuration Software

- The software is FREE to download and end users never need to worry about licensing fees or other hidden costs.

Low-Cost Factory Setup

- For less than $300 USD, the experts at Precision Digital will configure a ConsoliDator+ to an end user's exact specifications

One Controller. Multiple Solutions

8 Control & Alarm meters

28 Display Meters
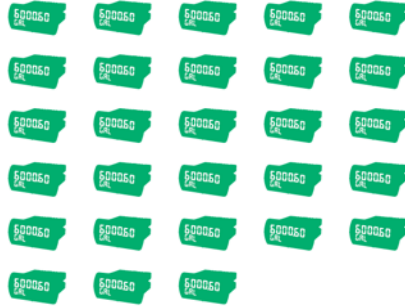
OR

1 ConsoliDator+ Multivariable Controller

- pH Monitoring
- Flow Measurement
- Temperature Indication
- Level Measurement
- Gas Detection
- Open Channel Flow
- Math Functions
- Modbus TCP, RTU, & ASCII
- Speed / Tachometer
- Pressure Indication
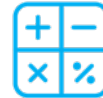- Alarms & Control
- Pump Control

Aside from being an excellent and cost-effective alternative to a PLC, the ConsoliDator+ can certainly help end users *consolidate* their panels that are filled with older panel meters with just ONE device!

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Display, Control, & Alarm Of Multiple 4-20 mA & Pulse Inputs

The ConsoliDator+ comes with an abundance of powerful features

Up to (28) 4-20 mA or pulse inputs, (25) relays, and (25) 4-20 mA outputs

All 4-20 mA inputs are isolated and provide a 24 VDC power supply to power the loop!

Configure timers, and schedule events based on day & time

Execute math functions that can be the source for other math channels, totalizers, alarms, or even outputs

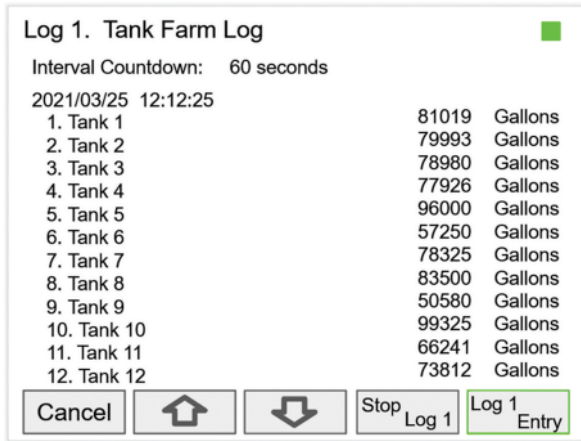Numeric & bar graph display with the ability to display short, fully customizable, messages.

RS-485 - Modbus RTU/ASCII

AND

Ethernet - Modbus TCP/IP
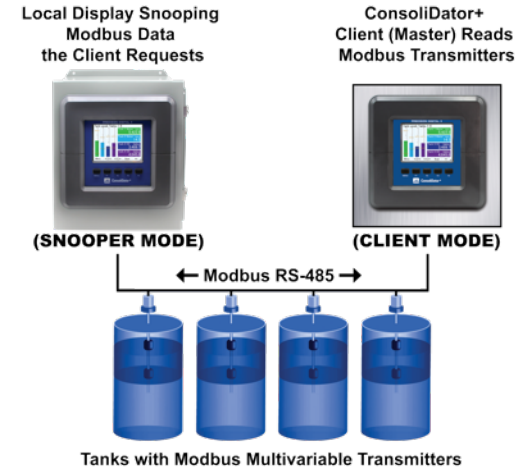
New Add-On Features

USB Data Logger

- Log millions of data points to an external 32GB USB drive. Create logs that contain the same type of process data or a mix.

Modbus Client, Snooper, & Spoofer

- Scan and display up to 199 Modbus registers

Questions, Comments, or Compliments?

Just let me know!

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